

# GlassFish v2 JBI Integration

**Binod P.G**

Presentation to AS user experience meeting 28<sup>th</sup> Nov 2006

<http://glassfish.dev.java.net>

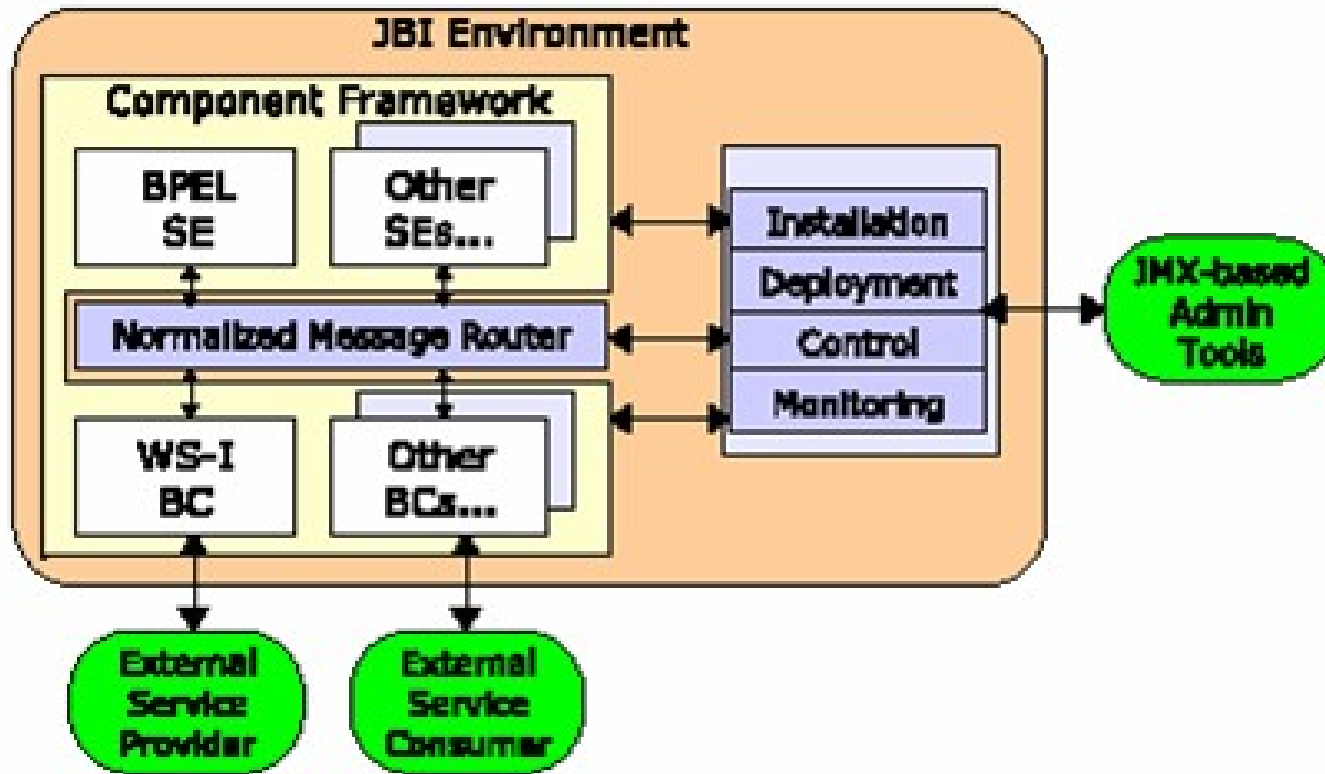
# Agenda

- What is JBI? What is JBI Integration?
- CLI Commands.
- Admin GUI.
- Runtime Integration.
- Java EE Service Engine.
- HTTP BC.
- Questions.

# What is JBI?

- From Wikipedia
  - > Java Business Integration (JBI) is a specification developed under the Java Community Process (JCP) for an approach to implementing a service-oriented architecture (SOA).
  - > JBI is built on a Web Services model, and provides a pluggable architecture for a container that hosts service producer and consumer components. Services connect to the container via binding components (BC) or can be hosted inside the container as part of a service engine (SE). The services model used is Web Services Description Language 2.0.

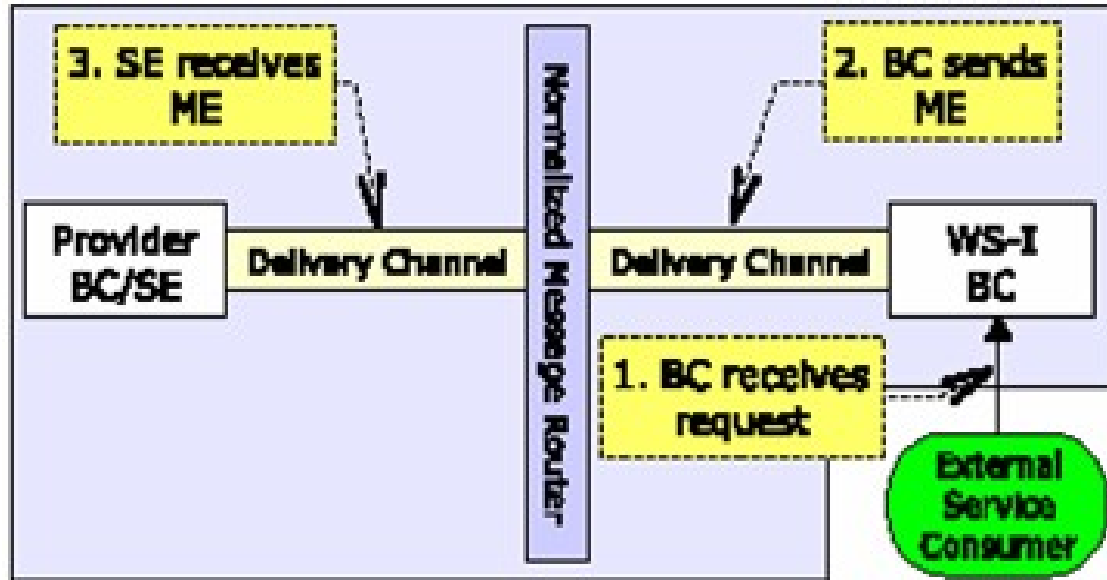
# JBI Architecture



# Key components

- Service Engines (SE)
  - > pluggable business logic
- Binding Components (BC)
  - > pluggable external connectivity
- Normalized message router (NMR)
  - > Message bus connecting SEs and BCs

# Message Exchange



# JBI and GlassFish before V2

- Open Source Project <http://open-esb.dev.java.net>
- Java EE SDK contains JBI and Application Server
  - > JBI is an optional add-on in Java EE SDK.
- Java EE SDK contains HTTP/SOAP BC and BPEL Service Engine.
- JBI and Appserver have their own administration tools
- Different enterprise architectures.

# JBI Integration in GlassFish V2

- Provide JBI functionality Out of the Box.
- Unified Clustering Architecture.
- Integrated Administration Experience.
  - > CLI Commands for JBI system.
  - > Admin GUI Support for JBI system.
  - > Asant supports JBI tasks.
  - > Autodeploy directory.
- System Components
  - > Java EE Service Engine.
  - > HTTP/SOAP BC.



# Admin CLI Commands

- Asadmin supports JBI.
- Supports Appserver Standalone and Cluster.
- List of example commands
  - > install-jbi-component
  - > start-jbi-component
  - > stop-jbi-component
  - > shut-down-jbi-component
  - > uninstall-jbi-component
  - > deploy-jbi-service-assembly
  - > start-jbi-service-assembly
  - > stop-jbi-service-assembly
  - > .....
  - > .....

# Admin GUI Integration

Sun Java System Application Server Enterprise Edition 9.1 Admin Console - Mozilla Firefox

File Edit View Go Bookmarks Tools Help

http://jlab512:4848/adminconsole/

java.net Forum... glassfish: Issue... Sun Java Sy... Bug ID: 63037... com.sun.apps... blueprints: Pac... Bug ID: 50767... GFWiki: UserE...

Home Version Log Out Help

User: user\_name Role: user\_name Server: server\_name

Sun Java System Application Server Enterprise Edition 9.1 Admin Console

Common Tasks

- Application Server
- Applications
  - Enterprise Applications
  - Web Applications
  - EJB Modules
  - Connector Modules
  - Lifecycle Modules
  - App Client Modules
- Web Services
- Integrations
  - JBI Deployments
  - JBI Components**
- Custom MBeans
- Resources
- Configuration

Application Server > Java Business Integration > JBI Components > Bindings and Engines

**Bindings and Engines** Libraries

## JBI Components

Manage JBI Binding Components and Service Engines

JBI Binding Components and Service Engines (2)

|    State Filter:  Type Filter:

<input type="checkbox"/>	Name	Type	Description	State
<input type="checkbox"/>	<a href="#">com.sun.httpsoapbc-1.0-2</a>	Binding	HTTP Soap Binding to send SOAP messages e.g. to and from BPEL service engine.	Started
<input type="checkbox"/>	<a href="#">JavaEEServiceEngine</a>	Engine	Java Enterprise Edition Service Engine	Started
	Name	Type	Description	State

Click a Binding Component or Service Engine name to see its details.

# Autodeploy

- JBI service assemblies can be autodeployed using appserver autodeploy directory.
- AS\_HOME/domains/domain1/autodeploy
- JBI components can be autoinstalled using AS\_HOME/domains/domain1/jbi/autoinstall directory.

# Runtime Integration

- JBI Runtime is integrated as a pre-defined lifecycle module in the domain.xml.
- Supports Developer Profile and Cluster Profile.
- Each Appserver VM contain a Normalized Message Router.
- Composite Applications can be deployed to appserver cluster.
- JBI Runtime follow appserver clustering architecture.

# Transaction Integration.

- The resources used in JBI can take part in appserver managed transaction.
- The resources used in JBI will be handled by appserver's transaction recovery mechanism.
- Both JBI and Java EE components can be executed within a single transaction.

# Java EE Service Engine

- Bridge between Java EE and JBI.
  - > Java EE apps can access JBI components.
  - > JBI components can access Java EE webservices.
- New Features
  - > Java EE apps can be packaged inside a JBI service assembly.
  - > Supports Transaction flow between Java EE and JBI.
  - > Supports Security propagation.
- Performance improvements
  - > No conversion between SOAP and JBI messages.

# HTTP/SOAP Binding Component

- Used to communicate with webservices from JBI service assemblies.
- System JBI component in Glassfish.
- Based on high-performance grizzly nio framework.

# Q & A



# GlassFish v2 JBI Integration

**Binod P.G**

[binod@dev.java.net](mailto:binod@dev.java.net)